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PATENT APPLICATION

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IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Patrick Brouhon

Confirmation No.: 1734

Application No.: 10/571,060

Examiner: Akililu K. Woldemariam

Filing Date: September 27, 2007

Group Art Unit: 2624

Title: Methods and Apparatus for Generating Images

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 02/18/2010.

☒ The fee for filing this Appeal Brief is \$540.00 (37 CFR 41.20).

☐ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month
\$130

☐ 2nd Month
\$490

☐ 3rd Month
\$1110

☐ 4th Month
\$1730

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$ 540. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Respectfully submitted,

Patrick Brouhon

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
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Sir:

This is an Appeal Brief under Rule 41.37 appealing the decision of the Primary Examiner dated December 21, 2009 (the “final Office Action”). Each of the topics required by Rule 41.37 is presented herewith and is labeled appropriately.

I. Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 11445 Compaq Center Drive W., Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. Related Appeals and Interferences

There are no appeals or interferences related to the present application of which the Appellant is aware.

III. Status of Claims

Claims 1-30 were cancelled previously without prejudice or disclaimer. (*See*, Preliminary Amendment filed March 8, 2006).

Claims 31-50 are pending in the application and stand finally rejected. Accordingly, Appellant appeals from the final rejection of claims 31-50, which claims are presented in the Appendix.

IV. Status of Amendments

No amendments have been filed subsequent to the final Office Action of December 21, 2009, from which Appellant takes this appeal.

V. Summary of Claimed Subject Matter

Referring to FIG. 1, a document 2 for use in a digital pen and paper system comprises a carrier 3 in the form of a single sheet of paper 4 with position identifying markings 5 printed on some parts of it. The markings 5, which are not shown to scale in FIG. 1, form a position identifying pattern 6 on the document 2. Also printed on the paper 4 are further markings 7 which are clearly visible to a human user of the document, and which make up the human visible content of the document 2. The content 7 is in the form of a number of lines and text and graphic features which extend over, and are therefore superimposed upon, the pattern 6. (*Appellant's specification, p. 7, ll. 14-23*).

Turning now to the claims, Appellant's independent claims at issue in this appeal recite the following subject matter.

Claim 31 recites:

A method of generating an image comprising a position identifying pattern (6) and content (7), the method comprising the steps of:

defining criteria relating to a region where the content (7) and the pattern (6) are superimposed, the criteria determining whether the pattern (6) will be distinguishable over the content (7) when applied to a product (*Appellant's specification, p. 14, l. 16 through p. 16, l. 8*);

with a printer client comprising a computer (200), identifying such a region in the image (*Appellant's specification, p. 11, ll. 1-11; p. 11, l. 22 through p. 12, ll. 28; p. 14, l. 16 though p. 15, l. 2*); and

with the printer client, selecting a characteristic of the pattern (6) or the (7) in the region identified by the printer client on the basis of the criteria, such that the image in the region meets the criteria (*Appellant's specification, p. 15, l. 4 through p. 16, l. 8*).

Claim 49 recites:

A computer program product for generating an image comprising a position identifying pattern (6) and content (7), the computer program product comprising:

a computer usable medium having computer usable program code embodied therewith (*Appellant's specification, p. 5, l. 27 through p. 6, l. 5*), the computer usable program code comprising:

computer usable program code configured to define criteria relating to a region where the content (7) and the pattern (6) are superimposed, the criteria determining whether the pattern (6) will be distinguishable over the content (7) when applied to a product (*Appellant's specification, p. 14, l. 16 through p. 16, l. 8*);

computer usable program code configured to identify such a region in the image (*Appellant's specification, p. 11, ll. 1-11; p. 11, l. 22 through p. 12, ll. 28; p. 14, l. 16 through p. 15, l. 2*); and

computer usable program code configured to select a characteristic of the pattern (6) or the content (7) in the region on the basis of the criteria, such that the image in the region meets the criteria (*Appellant's specification, p. 15, l. 4 through p. 16, l. 8*).

Claim 50 recites:

A printer client comprising a processor (210) for producing documents (2) comprising:

a pattern allocation module (212) configured to allocate an area of pattern space to the document (2) and generate position identifying pattern (6) for that area using a pattern generation algorithm (*Appellant's specification, p. 13, l. 1-13; p. 14, ll. 6-12*); and

a printer driver (214) configured to combine content (7) and the position identifying pattern (6) into a single file (*Appellant's specification, p. 13, ll. 1-13; p. 14, l. 1 through p. 15, l. 10; and p. 16, ll. 10-13*),

in which the printer driver (214) is configured to identify a region where the content (7) and the position identifying pattern (6) are superimposed, and select a characteristic of the position identifying pattern (6) or the content (7) in the region on the basis of criteria for determining whether the position identifying pattern (6) will be distinguishable over the content (7) when applied to a product, such that the image in the region meets the criteria (*Appellant's specification, p. 13, ll. 1-13; p. 14, l. 1 through p. 15, l. 10; and p. 16, ll. 10-13*).

VI. Grounds of Rejection to be Reviewed on Appeal

The final Office Action raised the following single rejection.

(1). Claims 31-50 were rejected under 35 U.S.C. § 103(a) over the combined teachings of U.S. Patent No. 7,400,769 to Lapstun et al. (hereinafter Lapstun), U.S. Patent No. 5,464,974 to Priddy et al. (hereinafter Priddy), and International Patent Application Publication No. WO 01/71644 A1 to Petter (hereinafter Petter).

Accordingly, Appellant hereby requests review of this rejection in the present appeal.

VII. Argument

(1). Claims 31-50 are patentable over *Lapstun, Priddy, and Petter*:

Claim 31:

Claim 31 recites:

A method of generating an image comprising a position identifying pattern and content, the method comprising the steps of:
defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product;
with a printer client comprising a computer, identifying such a region in the image; and
with the printer client, selecting a characteristic of the pattern or the content in the region identified by the printer client on the basis of the criteria, such that the image in the region meets the criteria.

(Emphasis added).

In contrast, Lapstun, Priddy, and Petter do not teach or suggest “[a] method of generating an image comprising a position identifying pattern and content, the method comprising the steps of defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product, with a printer client comprising a computer, identifying such a region in the image, and with the printer client, selecting a characteristic of the pattern or the content in the region identified by the printer client on the basis of the criteria, such that the image in the region meets the criteria.” (Claim 31).

The final Office Action concedes, “Lapstun does not disclose defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (final Office Action, p. 4). The final Office Action then cites to Priddy, and argues that

“Priddy discloses defining criteria (*determination of density, i.e., “the defining criteria”*) relating to a region where the content (sic) (*see items 104, 106 and 108, fig. 5*).” (*Id.*). However, the final Office Action then further concedes that “Lapstun and Priddy do not disclose the pattern are (sic) superimposed and the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (*Id.*). Thus, the final Office Action cites to Petter. However, Petter does not teach or suggest that which Lapstun and Priddy lack; namely, “defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (Claim 31).

In previous prosecution, the Examiner has found Appellant’s arguments persuasive with regard to Priddy and Petter. (See, e.g., Appellant’s response filed October 8, 2009, pp. 8-11; and final Office Action, p. 2). In addition, Appellant has, in fact, persuasively demonstrated that Petter does not teach or suggest the recitations of claim 31.

Specifically, Petter simply teaches “an image which is ***produced of a coding pattern***, the symbols of which comprise markings of varying sizes.” (Petter, p. 24, ll. 28-30) (*See also*, Petter, Abstract, teaching “a surface which is provided with ***an image in the form of a coding pattern***”) (emphasis added). In other words, Petter teaches a coding pattern that is configured such that the pattern itself makes up an image in a fashion similar to a mosaic. (*See e.g.*, Petter, Fig. 5A). There is, therefore, no distinction within the Petter reference between a position-identifying pattern and separate content. Consequently, Petter does not teach or suggest a distinct coding pattern that is superimposed with content. Therefore, Petter cannot remedy the acknowledged deficiencies of Lapstun and Priddy as alleged by the final Office Action.

In contrast to the cited prior art, claim 31 recites “[a] method of generating an image comprising a position identifying pattern and content, the method comprising the steps of defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (Claim 31). This subject matter is clearly not taught or suggested by Lapstun, Priddy, Petter, or any combination thereof.

Finally, because Lapstun, Priddy, and Petter do not teach or suggest the above-argued recitations of claim 31, the combination of prior art cannot possibly teach or suggest the other recitations of claim 31. Specifically, Lapstun, Priddy, and Petter cannot and do not teach or suggest criteria that “determin[es] whether the pattern will be distinguishable over the content when applied to a product.” (Claim 31). Further, the cited prior art combination cannot and does not teach or suggest, “with a printer client comprising a computer, identifying such a region in the image.” (Claim 31). Finally, the cited combination of prior art does not and cannot teach or suggest “with the printer client, selecting a characteristic of the pattern or the content in the region identified by the printer client on the basis of the criteria, such that the image in the region meets the criteria.” (Claim 31). In short, the cited prior art is entirely inapposite to the subject matter of claim 31.

The Supreme Court recently addressed the issue of obviousness in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007). The Court stated that the *Graham v. John Deere Co. of Kansas City*, 383, U.S. 1 (1966), factors still control an obviousness inquiry. Under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art,

as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly a method of generating an image comprising a position identifying pattern and content, the method comprising the steps of defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product, with a printer client comprising a computer, identifying such a region in the image, and with the printer client, selecting a characteristic of the pattern or the content in the region identified by the printer client on the basis of the criteria, such that the image in the region meets the criteria.

The differences between the cited prior art and the indicated claims are significant because the recitations of claim 31 provide for a way to create a document with both position identifying patterns and content that do not obscure one another. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 31 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 31 and its dependent claims should not be sustained.

Claim 49:

Claim 49 recites:

A computer program product for generating an image comprising a position identifying pattern and content, the computer program product comprising:
a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising:
computer usable program code configured to define criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product;
computer usable program code configured to identify such a region in the image; and

computer usable program code configured to select a characteristic of the pattern or the content in the region on the basis of the criteria, such that the image in the region meets the criteria.
(Emphasis added).

In contrast, Lapstun, Priddy, and Petter do not teach or suggest “[a] computer program product for generating an image comprising a position identifying pattern and content, the computer program product comprising a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising computer usable program code configured to define criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product, computer usable program code configured to identify such a region in the image, and computer usable program code configured to select a characteristic of the pattern or the content in the region on the basis of the criteria, such that the image in the region meets the criteria.” (Claim 31).

Again, as stated above in connection with the patentability of independent claim 31, the final Office Action concedes “Lapstun and Priddy do not disclose the pattern are (sic) superimposed and the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (*Id.*). Thus, the final Office Action cites to Petter. However, Petter does not teach or suggest that which Lapstun and Priddy lack; namely, “computer usable program code configured to define criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (Claim 49). As similarly argued above in connection with independent claim 31, because there is, no distinction within the Petter reference between a position-identifying pattern and separate content, Petter does not teach or suggest a distinct coding pattern that is superimposed with content.

In contrast to the cited prior art, claim 49 recites “[a] computer program product for generating an image comprising a position identifying pattern and content, the computer program product comprising a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising computer usable program code configured to define criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product.” (Claim 49). This subject matter is clearly not taught or suggested by Lapstun, Priddy, Petter, or any combination thereof.

Finally, as similarly argued above with regard to the patentability of independent claim 31, because Lapstun, Priddy, and Petter do not teach or suggest the above-identified recitations of claim 49, the combination of prior art cannot possibly teach or suggest the other recitations of claim 49. Specifically, Lapstun, Priddy, and Petter cannot and do not teach or suggest “the criteria determining whether the pattern will be distinguishable over the content when applied to a product,” “computer usable program code configured to identify such a region in the image,” or “computer usable program code configured to select a characteristic of the pattern or the content in the region on the basis of the criteria, such that the image in the region meets the criteria.” (Claim 49). In short, the cited prior art is entirely inapposite to the subject matter of claim 49.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly a computer program product for generating an image

comprising a position identifying pattern and content, the computer program product comprising a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising computer usable program code configured to define criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product, computer usable program code configured to identify such a region in the image, and computer usable program code configured to select a characteristic of the pattern or the content in the region on the basis of the criteria, such that the image in the region meets the criteria.

The differences between the cited prior art and the indicated claims are significant because the recitations of claim 49 provide for a way to create a document with both position identifying patterns and content that do not obscure one another. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 49 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 49 should not be sustained.

Claim 50:

Claim 50 recites:

A printer client comprising a processor for producing documents comprising:

a pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm; and

a printer driver configured to combine content and the position identifying pattern into a single file,

in which the printer driver is configured to identify a region where the content and the position identifying pattern are superimposed, and select a characteristic of the position identifying pattern or the content in the

region on the basis of criteria for determining whether the position identifying pattern will be distinguishable over the content when applied to a product, such that the image in the region meets the criteria.

(Emphasis added).

In contrast, Lapstun, Priddy, and Petter do not teach or suggest “[a] printer client comprising a processor for producing documents comprising a pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm, and a printer driver configured to combine content and the position identifying pattern into a single file, in which the printer driver is configured to identify a region where the content and the position identifying pattern are superimposed, and select a characteristic of the position identifying pattern or the content in the region on the basis of criteria for determining whether the position identifying pattern will be distinguishable over the content when applied to a product, such that the image in the region meets the criteria.” (Claim 50).

Lapstun does not teach or suggest, “a pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm.” (Claim 50). The final Office Action argues the following with regard to the recitation of “pattern allocation module” within claim 50:

Lapstun discloses . . . a pattern allocation module (software, i.e., “the module”) configured to allocate an area of pattern space (memory, i.e., “the allocate an area of pattern space”) to the document (see item 145, fig. 7 and items 147 and 148, fig. 10 and col. 8, lines 8-16) [and] generate position identifying pattern for that area using a pattern generation algorithm (software, i.e., “the algorithm”) (see item 145, fig. 7 and items 147 and 148, fig. 10 and col.8, lines 8-16).
(final Office Action, pp. 2-3).

However, it is unclear how item 145, fig. 7 and items 147 and 148, fig. 10 and col.8, lines 8-16 teach or suggest a pattern allocation module. This cited portion of Lapstun is as follows:

As shown in FIG. 2, the netpage pen 101 interacts with the coded data on a printed netpage 1 and communicates, via a short-range radio link 9, the interaction to a netpage printer. The printer 601 sends the interaction to the relevant netpage page server 10 for interpretation. In appropriate circumstances, the page server sends a corresponding message to application computer software running on a netpage application server 13. The application server may in turn send a response which is printed on the originating printer.

(Lapstun, col. 8, ll. 8-16).

Although this portion of Lapstun may incorporate software and hardware, there is no indication that any of these elements teach or suggest a pattern allocation module. Further, there is no indication that the steps outlined in this portion of Lapstun teach or suggest allocating an area of pattern space to a document and generating position identifying pattern for that area using a pattern generation algorithm. Therefore, Lapstun does not teach or suggest the “ pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm” of claim 50.

Further, Lapstun does not teach or suggest, “a printer driver configured to combine content and the position identifying pattern into a single file.” (Claim 50). The final Office Action argues the following with regard to the recitation of “a printer driver” with in clam 50:

Lapstun discloses . . . a printer driver (printing element, i.e., “the printer driver”) configured to combine content (see item 300, fig. 17) and the position identifying pattern into a single file (static element, i.e., “single file”) (see abstract and items 3 and 4, fig. 1 and item 300, fig. 17 and item 843, fig. 28). (final Office Action, pp. 2-3).

Item 300 of Figure 7 of Lapstun is described as “a single printing element 300 of a Memjet™ printhead” that includes “a nozzle 302 , the nozzle rim 303 , the nozzle chamber 304 , the fluidic seal 305 , the ink channel rim 306 , the lever arm 307 , the active actuator beam pair 308 , the passive actuator beam pair 309 , the active actuator anchor 310 , the passive actuator anchor 311 , and the ink inlet 312.” (Lapstun, col. 17, ll. 3-18). Clearly

element 300 of Lapstun is a nozzle of a printhead or a similar physical element that is used in jetting ink onto a medium such as paper. Thus, element 300 of Lapstun cannot be interpreted as a printer driver configured to combine content and position identifying pattern into a single file.

Still further, as stated above in connection with the patentability of independent claims 31, and 49, because the final Office Action concedes that “Lapstun and Priddy do not disclose the pattern are (sic) superimposed and the criteria determining whether the pattern will be distinguishable over the content when applied to a product” (final Office Action, p. 4), and because there is no distinction within the Petter reference between a position-identifying pattern and separate content, Lapstun, Priddy, and Petter do not teach or suggest a distinct coding pattern that is superimposed with content.

In contrast to the cited prior art, claim 50 recites “[a] printer client comprising a processor for producing documents comprising a pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm, and a printer driver configured to combine content and the position identifying pattern into a single file, in which the printer driver is configured to identify a region where the content and the position identifying pattern are superimposed, and select a characteristic of the position identifying pattern or the content in the region on the basis of criteria for determining whether the position identifying pattern will be distinguishable over the content when applied to a product, such that the image in the region meets the criteria.” (Claim 50). This subject matter is clearly not taught or suggested by Lapstun, Priddy, Petter, or any combination thereof.

Finally, as similarly argued above with regard to the patentability of independent claims 31 and 49, because Lapstun, Priddy, and Petter do not teach or suggest the above-

identified recitations of claim 50, the combination of prior art cannot possibly teach or suggest the other recitations of claim 50. Specifically, Lapstun, Priddy, and Petter cannot and do not teach or suggest “criteria for determining whether the position identifying pattern will be distinguishable over the content when applied to a product,” “in which the printer driver is configured to identify a region where the content and the position identifying pattern are superimposed,” or “in which the printer driver is configured to . . . select a characteristic of the position identifying pattern or the content in the region on the basis of criteria . . . such that the image in the region meets the criteria..” (Claim 50). In short, the cited prior art is entirely inapposite to the subject matter of claim 50.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly a printer client comprising a processor for producing documents comprising a pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm, and a printer driver configured to combine content and the position identifying pattern into a single file, in which the printer driver is configured to identify a region where the content and the position identifying pattern are superimposed, and select a characteristic of the position identifying pattern or the content in the region on the basis of criteria for determining whether the position identifying pattern will be distinguishable over the content when applied to a product, such that the image in the region meets the criteria.

The differences between the cited prior art and the indicated claims are significant because the recitations of claim 50 provide for a way to create a document with both position identifying patterns and content that do not obscure one another. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 50 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 50 should not be sustained.

Additionally, various dependent claims of the application recite subject matter that is further patentable over the cited prior art. Specific, non-exclusive examples follow.

Claims 33 and 34:

Claim 33 recites: “[a] method according to claim 32 wherein the characteristic of the pattern within the region is selected *depending on the density of the content within the region*.” (Emphasis added). Claim 34 recites: “In contrast, “[a] method according to claim 33 wherein the pattern is made up of a plurality of pattern elements and the characteristic is the density of each of the pattern elements.” Lapstun, Priddy, and Petter do not teach or suggest, “wherein the characteristic of the pattern within the region is selected depending on the density of the content within the region,” or “wherein the pattern is made up of a plurality of pattern elements and the characteristic is the density of each of the pattern elements.” (Claims 33 and 34, respectively).

The final Office Action does not employ Lapstun and Petter in rejecting the recitations of claims 33 and 34. The final Office Action merely cites to Priddy, and states that steps 104-108 of Figure 5 of Priddy provide support for this recitation. (final Office Action, p. 5). However, this is incorrect. Priddy simply teaches the following:

In step 104, CPU 28 calculates the product of the number of squares contained in each side 14 and *determines the density of cells contained within matrix 10. By calculating the* angle of the matrix, the matrix size and the matrix *density, CPU 28 can calculate the position of each visual cell 20, 22 relative to the intersecting lines 12 in accordance with a step 106.* Thus, the center of each visual cell 20, 22 can be determined. *CPU 28 now knows the physical size of the pattern to be decoded, the total number of visual cells or their electronic equivalent stored as data 19 and the location of the center of each visual cell 20, 22 in relation to the four corners of matrix 10.* Since *physical size and cell density of matrix 10 are calculated values rather than predefined,* CPU 28 may recognize and decode a matrix 10 of any physical size or density.

The pattern of data 19 is decoded by first identifying the pattern distribution key in accordance with step 108. The distribution key will always be stored as a number of visual cells located at a specific position relative to the corners of matrix 10.

(Emphasis added).

In other words, steps 104-108 simply determine how many cells (elements 20 and 22) are included in a matrix of cells, but has no relation to selecting a characteristic of a pattern depending on the density of *content* associated with the pattern.

In contrast, claim 33 recites: “wherein the characteristic of the pattern within the region is selected depending on the density of the content within the region,” and claim 34 recites: “wherein the pattern is made up of a plurality of pattern elements and the characteristic is the density of each of the pattern elements.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly wherein the characteristic of the pattern within the region

is selected depending on the density of the content within the region, or wherein the pattern is made up of a plurality of pattern elements and the characteristic is the density of each of the pattern elements.

The differences between the cited prior art and the indicated claims are significant because selecting a characteristic of the pattern depending on the density of content allows for a way to create a document with both position identifying patterns and content that do not obscure one another. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claims 33 and 34 under 35 U.S.C. § 103 and Graham. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claims 33 and 34 and their respective dependent claims should not be sustained.

Claims 35, 36, and 37:

Claim 35 recites: “[a] method according to claim 34 wherein the density of each of the pattern elements is selected ***a high density and a low density.***” (Emphasis added). Similarly, claim 36 recites “[a] method according to claim 35 wherein ***the high density corresponds to the pattern elements being substantially covered with marking material,*** when the image is applied to a product.” (Emphasis added). Finally, claim 37 recites: “[a] method according to claim 35 wherein ***the low density corresponds to the pattern elements being left substantially free of marking material,*** when the image is applied to a product.” (Emphasis added). In contrast, Lapstun, Priddy, and Petter do not teach or suggest “a high density and a low density” where “the high density corresponds to the pattern elements being substantially covered with marking material” and “the low density corresponds to the pattern elements being left substantially free of marking material.” (Claims 35-37).

Again, the final Office Action does not employ Lapstun and Petter in rejecting the recitations of claims 35-37. The final Office Action merely cites to Priddy. Specifically, the final Office Action cites to column 6, lines 6-11 cited above in connection with the patentability of claims 33 and 34. However, as stated above, steps 104-108 of Priddy simply determine how many cells (elements 20 and 22) are included in a matrix of cells, and has no relation to selecting a density of pattern elements (a high or low density) dependant upon the degree of which the pattern elements are covered by marking material.

In contrast, claims 35, 36, and 37 recite “a high density and a low density” where “the high density corresponds to the pattern elements being substantially covered with marking material” and “the low density corresponds to the pattern elements being left substantially free of marking material,” respectively. This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy and Petter, did not include the claimed subject matter, particularly a high density and a low density where the high density corresponds to the pattern elements being substantially covered with marking material and the low density corresponds to the pattern elements being left substantially free of marking material.

The differences between the cited prior art and the indicated claims are significant because selecting a high or low density of pattern elements where the high density corresponds to the pattern elements being substantially covered with marking material and the

low density corresponds to the pattern elements being left substantially free of marking material allows for a way to ensure there is sufficient contrast between the pattern and the content superimposed thereupon. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claims 35, 36, and 37 under 35 U.S.C. § 103 and Graham. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claims 35, 36, and 37 and their respective dependent claims should not be sustained.

Claim 38:

Claim 38 recites: “[a] method according to claim 37 including *defining a size of each of the pattern elements, the size depending on whether the pattern element is high density or low density.*” (Emphasis added). In contrast, Lapstun, Priddy, and Petter do not teach or suggest, “defining a size of each of the pattern elements, the size depending on whether the pattern element is high density or low density.”

The final Office Action again cites to Priddy singularly, and refers to items 104, 106, and 108 of fig. 5 and col. 6, lines 6-11 of Priddy as cited to above in connection with claims 33-37. However, as stated above, this portion of Priddy simply determines how many cells (elements 20 and 22) are included in a matrix of cells, and has no relation to selecting a density of pattern elements (a high or low density) depending on whether the pattern element is high density or low density.

In contrast, claim 38 recites: “a method according to claim 37 including defining a size of each of the pattern elements, the size depending on whether the pattern element is high density or low density.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly defining a size of each of the pattern elements, the size depending on whether the pattern element is high density or low density.

The differences between the cited prior art and the indicated claims are significant because the recitations of claim 38 ensure that there is sufficient contrast between the pattern and the content superimposed thereupon. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 38 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 38 should not be sustained.

Claim 40:

Claim 40 recites: “[a] method according to claim 39 wherein the content within said region is classified as high, low or intermediate density, and the method further comprises ***modifying the content in the intermediate density content regions to make it higher or lower density thereby to maintain contrast between the content and the pattern in the intermediate density regions.***” (Emphasis added). In contrast, Priddy and Petter do not teach or suggest, “modifying the content in the intermediate density content regions to make it higher or lower density thereby to maintain contrast between the content and the pattern in the intermediate density regions.” (Claim 40).

The final Office Action again cites to column 6, lines 6-11 in rejecting claim 40. (final Office Action, p. 7). However, as stated above in connection with claim 35-37, this portion of Priddy simply teaches the method of “*reading and decoding* matrix 10,” which is accomplished by steps 104 through 108. (See, Priddy, col. 5, ll. 66-67). This section has no relation to modifying content in an intermediate density content region to make it higher or lower density in order to maintain contrast between the content and the pattern in the intermediate density regions.

In contrast, claim 40 recites, “modifying the content in the intermediate density content regions to make it higher or lower density thereby to maintain contrast between the content and the pattern in the intermediate density regions.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly modifying the content in the intermediate density content regions to make it higher or lower density thereby to maintain contrast between the content and the pattern in the intermediate density regions.

The differences between the cited prior art and the indicated claims are significant because modifying the content in the intermediate density content regions to make it higher or lower density allows for a way to maintain contrast between the content and the pattern in the intermediate density regions. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will

not support a rejection of claim 40 under 35 U.S.C. § 103 and Graham. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 40 should not be sustained.

Claims 41 and 42:

Claim 41 recites “[a] method according to claim 31 wherein the characteristic is a *characteristic of the content*.” (Emphasis added). Similarly, claim 42 recites “[a] method according to claim 41 wherein, *the characteristic is the density of the content*, which is limited to at least one predetermined range to maintain contrast between the content and the pattern within the region.” In addition to the arguments presented above in connection with the patentability of claim 31, Lapstun, Priddy, and Petter do not teach or suggest “wherein the characteristic is a *characteristic of the content*,” or “wherein the characteristic is the density of the content.” (Claims 41 and 42).

The final Office Action, in rejecting claims 41 and 42, cites to steps 104-108 and column 6, line 66 through column 7, line 6 of Priddy. (final Office Action, p. 7). However, these sections of Priddy simply teach the method of “*reading and decoding* matrix 10,” which is accomplished by steps 104 through 108, and how a user may select the level of repetition of the pattern that is to be printed on a sheet. (Priddy, col. 5, ll. 66-67 and col. 6, l. 66 through col. 7, l. 16). These sections are not related to selecting a characteristic of the content, or wherein the characteristic is the density of the content.

In contrast, claims 41 and 42 recite “wherein the characteristic is a characteristic of the content,” and “wherein the characteristic is the density of the content.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly wherein the characteristic is a characteristic of the content, and wherein the characteristic is the density of the content.

The differences between the cited prior art and the indicated claims are significant because being able to select a characteristic of the content and/or wherein the characteristic is the density of the content allows for a way to maintain contrast between the content and the pattern in the intermediate density regions. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claims 41 and 42 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claims 41 and 42 should not be sustained.

Claim 44:

Claim 44 recites “[a] method according to claim 41 wherein the characteristic of the content is ***the nature of the marking material to be used*** when applying the content to a product.” (Emphasis added). In contrast, Lapstun, Priddy, and Petter do not teach or suggest, “wherein the characteristic of the content is the nature of the marking material to be used.” (Claim 44).

The final Office Action states that Petter teaches that the “center points of a marking, i.e., the marking material” teach the recitations of claim 44. (final Office Action, pp. 7-8).

The final Office Action further cites to page 8, lines 13-25 of Petter. However, this section of Petter does not discuss the nature of the marking material (e.g. ink), and simply teaches determination of locations of overlapping markings.

In contrast, claim 44 recites, “wherein the characteristic of the content is the nature of the marking material to be used.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly wherein the characteristic of the content is the nature of the marking material to be used.

The differences between the cited prior art and the indicated claims are significant because being able to select a characteristic of the content wherein the characteristic of the content is the nature of the marking material to be used when applying the content to a product allows for different wavelengths of the material to be detectable, thus allowing for a greater contrast between the position identifying pattern and the content. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 44 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 44 and its dependent claim should not be sustained.

Claim 45:

Claim 45 recites “[a] method according to claim 44 wherein the *marking material is selected to be different from that selected for applying the pattern to the product.*”

(Emphasis added). In connection with the arguments above in connection with the patentability of claim 44, Lapstun, Priddy, and Petter do not teach or suggest, “wherein the marking material is selected to be different from that selected for applying the pattern to the product.” (Claim 45).

The final Office Action cites to page 9, line 25 through page 10, line 5 of Petter in rejecting claim 45. (final Office Action, p. 8). However, this portion of Petter simply teaches printing a raster point in connection with a marking, but does not teach or suggest that the raster point and marking are composed of differing marking materials.

In contrast, claim 45 recites, “wherein the marking material is selected to be different from that selected for applying the pattern to the product.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly wherein the marking material is selected to be different from that selected for applying the pattern to the product.

The differences between the cited prior art and the indicated claims are significant because being able to select a characteristic of the content wherein the characteristic of the content is the nature of the marking material to be used when applying the content to a

product allows for different wavelengths of the material to be detectable, thus allowing for a greater contrast between the position identifying pattern and the content. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 45 under 35 U.S.C. § 103 and Graham. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 45 should not be sustained.

Claim 47:

Claim 47 recites: “[a] method according to claim 46 *wherein the pattern and the content are applied to the product in a one-pass process.*” (Emphasis added). In contrast, Lapstun, Priddy, and Petter do not teach or suggest, “wherein the pattern and the content are applied to the product in a one-pass process.” (Claim 47).

The final Office Action cites to Figure 1 of Petter in rejecting claim 47. However, Petter utterly fails to disclose the means by which the pattern (3) of figure 1 was printed on the sheet of paper (1); whether by a one-pass process, or whether several passes were used in printing the pattern on the sheet of paper (1). Further, it is clear that no content exists in association with or superimposed with the pattern (3) of figure 1, thus making it impossible for Figure 1 of Petter to teach, “wherein the pattern *and the content* are applied to the product in a one-pass process.” (Claim 47).

In contrast, claim 47 recites: “[a] method according to claim 46 wherein the pattern and the content are applied to the product in a one-pass process.” This subject matter is clearly not taught or suggested by Lapstun, Priddy, and Petter.

Again, under the analysis required by *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), to support a rejection under § 103, the scope and content of the prior art must

first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Lapstun, Priddy, and Petter, did not include the claimed subject matter, particularly wherein the pattern and the content are applied to the product in a one-pass process.

The differences between the cited prior art and the indicated claims are significant because the recitations of claim 47 provide for a document with both a position identification pattern and content contained thereon that does not require several passes through a printer, and, thus, provides for faster completion of the print job. Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 47 under 35 U.S.C. § 103 and *Graham*. Therefore, for at least the reasons explained here, the rejection based on Lapstun, Priddy, and Petter of claim 47 should not be sustained.

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of December 21, 2009 is respectfully requested.

Respectfully submitted,

DATE: April 19, 2010

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VIII. CLAIMS APPENDIX

1-30. (canceled)

31. (previously presented) A method of generating an image comprising a position identifying pattern and content, the method comprising the steps of:

defining criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product;

with a printer client comprising a computer, identifying such a region in the image;
and

with the printer client, selecting a characteristic of the pattern or the content in the region identified by the printer client on the basis of the criteria, such that the image in the region meets the criteria.

32. (previously presented) A method according to claim 31 wherein the characteristic is a characteristic of the pattern.

33. (previously presented) A method according to claim 32 wherein the characteristic of the pattern within the region is selected depending on the density of the content within the region.

34. (previously presented) A method according to claim 33 wherein the pattern is made up of a plurality of pattern elements and the characteristic is the density of each of the pattern elements.

35. (previously presented) A method according to claim 34 wherein the density of each of the pattern elements is selected a high density and a low density.

36. (previously presented) A method according to claim 35 wherein the high density corresponds to the pattern elements being substantially covered with marking material, when the image is applied to a product.

37. (previously presented) A method according to claim 35 wherein the low density corresponds to the pattern elements being left substantially free of marking material, when the image is applied to a product.

38. (previously presented) A method according to claim 37 including defining a size of each of the pattern elements, the size depending on whether the pattern element is high density or low density.

39. (previously presented) A method according to claim 34 further comprising classifying the content within the region as high density or low density, and selecting the low pattern element density if the content is high density, and the high pattern element density if the content is low density.

40. (previously presented) A method according to claim 39 wherein the content within said region is classified as high, low or intermediate density, and the method further comprises modifying the content in the intermediate density content regions to make it higher or lower density thereby to maintain contrast between the content and the pattern in the intermediate density regions.

41. (previously presented) A method according to claim 31 wherein the characteristic is a characteristic of the content.

42. (previously presented) A method according to claim 41 wherein, the characteristic is the density of the content, which is limited to at least one predetermined range to maintain contrast between the content and the pattern within the region.

43. (previously presented) A method according to claim 31 wherein the image is applied to a product using a marking material, the marking material being the same for the pattern and the content.

44. (previously presented) A method according to claim 41 wherein the characteristic of the content is the nature of the marking material to be used when applying the content to a product.

45. (previously presented) A method according to claim 44 wherein the marking material is selected to be different from that selected for applying the pattern to the product.

46. (previously presented) A method according to claim 31 further comprising applying the image to a product.
47. (previously presented) A method according to claim 46 wherein the pattern and the content are applied to the product in a one-pass process.
48. (previously presented) A method according to claim 46 wherein the pattern and the content are applied to the product by a printer.
49. (previously presented) A computer program product for generating an image comprising a position identifying pattern and content, the computer program product comprising:
- a computer usable medium having computer usable program code embodied therewith, the computer usable program code comprising:
 - computer usable program code configured to define criteria relating to a region where the content and the pattern are superimposed, the criteria determining whether the pattern will be distinguishable over the content when applied to a product;
 - computer usable program code configured to identify such a region in the image; and
 - computer usable program code configured to select a characteristic of the pattern or the content in the region on the basis of the criteria, such that the image in the region meets the criteria.

50. (previously presented) A printer client comprising a processor for producing documents comprising:

a pattern allocation module configured to allocate an area of pattern space to the document and generate position identifying pattern for that area using a pattern generation algorithm; and

a printer driver configured to combine content and the position identifying pattern into a single file,

in which the printer driver is configured to identify a region where the content and the position identifying pattern are superimposed, and select a characteristic of the position identifying pattern or the content in the region on the basis of criteria for determining whether the position identifying pattern will be distinguishable over the content when applied to a product, such that the image in the region meets the criteria.

IX. Evidence Appendix

None

X. Related Proceedings Appendix

None